Gordon Conference on Phagocytes

A request for meeting support

Thomas P Stossel, Chairman
Gordon Research Conference

Alexander M Cruickshank, Director,
Gordon Research Conferences

1. Gordon Conference on Phagocytes, July 4-8, 1983 at Proctor Academy, Andover, NH.

2. Organizer: Thomas P Stossel, Chief, Hematology-Oncology Unit, Massachusetts General Hospital; Professor of Medicine, Harvard Medical School, Boston, Massachusetts 02114.

3. Contractor: Gordon Research Conferences Office, Pastore Chemical Laboratory, University of Rhode Island, Kingston, Rhode Island 02881

4. Tentative Meeting Program:

Session 1. Lipid mediators and phagocytes.
- C. Parker, Washington University, St. Louis, MO
- B. Samuelsson, Karolinska Institute, Stockholm, Sweden
- W. Scott, Rockefeller University,NY
- P. Cuatrecasas, Wellcome Laboratories, Triangle Park, NC

Session 2. Protein mediators and phagocytes
- M. Frank, National Institutes of Health, Bethesda, MD
- P. Levine, Washington University, St.Louis, MO
- T. Hugli, Scripps Research Foundation, LaJolla, CA
- D. Mosher, University of Wisconsin, Madison, WI

Session 3. Phagocyte receptors
- S. Silverstein, Rockefeller University, NY
- D. Fearon, Harvard Medical School, Boston, MA
- J. Unkeless, Rockefeller University, NY
- E. Goetzl, Hughes Medical Institute, San Francisco, CA

Session 4. Phagocyte membrane signalling mechanisms
- G. Weissmann, New York University, NY
- P. Naccache, University of Connecticut, Farmington, CONN
- D. Romeo, University of Trieste, Italy
- P. Lew, University of Geneva, Switzerland

Session 5. Phagocyte movements
- S. Zigmond, University of Pennsylvania, Philadelphia, PA
- J. Oliver, University of Connecticut, Farmington, CN
- K. Weber, Max Planck Institute, Goettingen, GFR
- J. Hartwig, Harvard Medical School, Boston, MA

Session 6. Effector mechanisms of mononuclear phagocytes
C. Nathan, Rockefeller University, NY
P. Henson, National Jewish Hospital, Denver, CO
H. Colten, Harvard Medical School, Boston, MA
R. Ross, University of Washington, Seattle, WA

Session 7. Posters.

Session 8. Phagocyte effector mechanisms-oxygen independent
M. Baggiolini, Wander Institute, Bern, Switzerland
M. Zimmerman, Merck Institute, Rahway, NJ
A. Janoff, SUNY, Stony Brook, NY
P. Elsbach, New York University, NY

Session 9. Phagocyte effector mechanisms-oxygen dependent
S. Klebanoff, University of Washington, Seatlle, WA
B. Babior, Tufts University Medical School, Boston, MA
H. Cohen, Rochester University Medical School, Rochester, NY
D. Schneider, Dartmouth Medical School, Hanover, NH

The rules of the Gordon Conferences prohibit publication of the proceedings of the meeting.

5. Meeting attendees:

Approximately 150 participants will be selected from applicants to respond to the published announcement concerning the Gordon Conference. It is expected that most applications will be from academic institutions, and that half of these will be basic scientists and half will be clinicians. In addition, applications from industry, particularly the pharmaceutical industry, and from federal agencies, including armed forces microbiology institutes, are also anticipated.

6. History:

The first Gordon Conference on phagocytes was organized two years ago by Dr Bernard Babior. This conference was extremely successful as evidenced by:

a) attendance to capacity;
b) a wide variety of participants reflecting the distribution cited in item 5 above;
c) lively discussions and exciting ambience;
d) very favorable responses to Conference questionnaires leading to
e) decision by the Gordon Conferences to repeat the conference

7. Justification:

Phagocytes are animal cells with the capacity to engulf particulate matter. As a general biological activity, phagocytosis involves the binding of particulates to receptors on the external surface of the plasma membranes of phagocytes, an event followed by the elaboration of signals to the peripheral

cytoplasm which mobilize cytoskeletal elements. These fiber systems assemble and provide the work of engulfement. This work is fueled by metabolic energy. The engulfement process involves the extension of pseudopodia which ultimately fuse to enclose the object within a vacuole bounded by plasma membrane. During the ingestion event, certain plasma membrane receptors and other moieties segregate into and out of the phagocytic vacuole. Most actively phagocytic cells are highly motile. The morphology and chemistry of phagocytosis is essentially a special version of the general problem of motility of eukaryotic cells.

Phagocytosis is useful to free living ameboid cells for nutrition. In metazoan cells which compose higher organisms, phagocytosis has several physiological functions. For example, the ingestion of thyroglobulin by epithelium of the thyroid gland is important for thyroid physiology. Retinal pigment epithelial cell ingestion of outer rod segments is vital for normal vision. However, most research has focussed on the so-called "professional" phagocytes, bone-marrow derived hematopoietic cells which are required for defense of higher organisms against microbial infection. These cells, the polymorphonuclear and mononuclear phagocytes are also mediators of inflammation and scavengers of old and dead cells and debris. These functions of phagocytes depend to a large extent on a complex armamentarium of chemicals. These chemicals include metabolites of oxygen, hydrolytic enzymes, membrane-active compounds, and a variety of potent vasoactive and inflammatory mediators. Diseases have been identified which result from underactivity of phagocytes and which lead to an abnormal susceptibility to microbial infections. Coversely, degenerative, inflammatory and even neoplastic diseases are believed to result from the overactivity of phagocytic cells.

From the foregoing, it is evident that phagocytes are suitable for the attention of a wide spectrum of scientific disciplines: biochemistry, microbiology, pathology, cell biology, immunology, and clinical medicine. This suitability reflects the large number of scientists of different disciplines studying phagocytes in their research. Some of this research is focussed on basic mechanisms, while some is directed toward aspects of the prevention and treatment of infection and the control of inflammation. The ecumenical nature of this effort is mirrored in the individuals listed in the preliminary program of the Gordon Conference on Phagocytes.

8. Funding of the meeting:

a. Costs:

Transportation for session chairpersons and speakers...$19,200

(estimated cost, equal to approximately 1.3 x round trip airfares from city of origin to Boston, MA as of January, 1982)

Conference fees (40 @ $250).....10,000.

TOTAL.....29,200

b. Amount requested in total: $29,000. If the sum awarded this conference from all sources exceeds the amount required for travel and conference fees of the invited participants, expenses will be paid in such a way that the same proportion on each award will be used. Any surplus will be returned to the granting agencies.